



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,999	09/30/2003	Jessica L. Voss-Kehl	58227US002	5245

32692 7590 02/23/2007  
3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER
----------

PENG, KUO LIANG

ART UNIT	PAPER NUMBER
----------	--------------

1712

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/23/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

**Office Action Summary**

Application No.

10/674,999

Applicant(s)

VOSS-KEHL ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/28/06 Amendment.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 8-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. The Applicants' amendment filed November 28, 2006 is acknowledged.

Claims 6-7 and 27-59 are deleted. Claim 17 is amended. Now, Claims 1-5 and 8-26 are pending.

2. The text of those sections of Title 35, U.S. code not included in this action can be found in prior Office Action(s).

### *Claim Rejections - 35 USC § 103*

4. Rejection of Claims 1-5, 9-19, 22 and 26 under 35 USC 103(a) as being unpatentable over Matsuda (US 6 586 104) in view of Iryo (US 5 789 476) is maintained because the rejection is adequately set forth in paragraph 5 of Paper No. 090206. Applicant's arguments have been fully considered but they are not persuasive. The focus argument related to the core patentability is discussed below.

For Applicants' argument (Remarks, page 6, 5<sup>th</sup> paragraph), Applicants are reminded that Matsuda teaches that the fine oxide particles **preferably** have a **large amount** of OH group on their surface. (col. 3, lines 48-50) As such, it

Art Unit: 1712

appears that the aforementioned teaching is merely a preferred embodiment.

Certainly, Matsuda does **not** teach away fine oxide particles having a **relatively small amount** of OH group on the surface thereof.

For Applicants' argument (Remarks, page 7, 1<sup>st</sup> paragraph), Applicants' argument is not persuasive because as mentioned in the prior Office actions, Matsuda's polymer has a molecular weight range (col. 5, lines 50-60) **substantially overlap** with that of Applicants' polymer (Specification, page 16, last paragraph). The **amounts** of the particles of the inorganic compound and the silsesquioxane polymer are described in col. 6, lines 12-18. As such, Matsuda's composition is substantially the same as that of Applicants. Therefore, Matsuda's composition and that of Applicants' should have the same viscosities.

For Applicants' argument (Remarks, page 7, 2<sup>nd</sup> paragraph), the adhesive promoter is **optional**.

For Applicants' argument (Remarks, page 7, 3<sup>rd</sup> paragraph), Iryo teaches the use of silanes such as **tetraalkoxysilanes, alkyltrialkoxysilanes**, etc. for surface modifying the particulate compound oxides. (col. 6, lines 27-67) As such, these silanes are **not** used as the matrix.

For Applicants' argument (Remarks, page 7, 4<sup>th</sup> paragraph), the flexibilizers are **optional**.

5. Rejection of Claims 20-21 under 35 USC 103(a) as being unpatentable over Matsuda in view of Chandross (US 6 251 486).

For Applicants' argument (Remarks, page 8, 2<sup>nd</sup> paragraph), Examiner disagrees. The dialkyldialkoxysilanes and trialkylmonoalkoxysilanes are used for preparing the silsesquioxane. In other words, these silanes appear to be incorporated as **additives** for **synthesizing** the silsesquioxane as indicated in US 2005/0069718 ([0058]). As such, they are part of the **bulk** polymer.

6. Rejection of Claims 1-5, 8, 10-15, 18-19 and 22-26 under 35 USC 103(a) as being unpatentable over Matsuda in view of Atkinson (US 4 909 852) is maintained because the rejection is adequately set forth in paragraph 7 of Paper No. 090206. Applicant's arguments have been fully considered but they are not persuasive. The focus argument related to the core patentability is discussed below.

For Applicants' argument (Remarks, page 8, 5<sup>th</sup> paragraph), Examiner's position in paragraph 4 above applies here.

For Applicants' argument (Remarks, page 8, last paragraph), Applicants are reminded that the reason or motivation to modify the reference may often suggest

Art Unit: 1712

what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972) Furthermore, Applicants alleged that the organic acids on a nanoparticle's surface is not able to function as a catalyst. This is merely an opinion. The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) Furthermore, Atkinson teaches the use of carboxylic acids having less than 8 carbon atom, which renders hexanoic acid having 7 carbon atoms obvious.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date

Art Unit: 1712

of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/674,999

Page 7

Art Unit: 1712

klp

February 17, 2006

A handwritten signature in black ink, appearing to read 'Kuo-Liang Peng', written in a cursive style.

Kuo-Liang Peng  
Primary Examiner  
Art Unit 1712